The RARS EXCITER

Issue 234 September, 1989 Club Repeaters: 146.04/64 & 223.04/224.64

ARRL TO PETITION FOR NO CODE "COMMUNICATOR" LICENSE

The directors of the ARRL met on July 21 and 22, and acting on the recommendations of their no code study committee, they agreed that the time had come to support a class of amateur radio operator license which did not require knowledge of Morse Code.

The study committee recommended that the new class of license be created similar to the requirements of the Technician class but without the 5 WPM code requirement. To obtain this new license, an applicant would be required to pass the present Novice and Technician written tests (Elements 2 and 3A), which would be administered by the existing VEC program.

The committee also recommended the new class licensees receive destinctive call prefixes in the 2X3 format (''NA#''), and all VHF privileges to the present Technician class, except only limited, digital-only, access to 144.9 to 145.1 MHz on 2 meters.

The ARRL directors were in basic, but not total agreement with the recommendations presented. After discussion, the directors agreed that the formal ARRL petition should include:

(1) The new license class should be codeless.

(2) The examination should consist of question from the existing Elements 2 and 3A question pools ... plus additional questions including ones related to Morse code. (The board felt that this was desirable to instill in the applicants that Morse code is indeed a basic part and tradition of amateur radio. ''You could fail every one of those [code related] questions and still pass,'' stated ARRL Executive Vice-Pres. David Sumner. ''It won't be a code requirement in disguise.''

(3) License examinations to be given for the new class of license should be administered by the established (accredited) volunteer examiners, i.e. the three examiner VEC system.

(4) There should be an upgrade path to the present Technician license by way of the 5 WPM code test, again administered solely through the established VE/VEC system.

(5) Call signs should be assigned from the Group ''D'' call sign blocks, i.e. the two-by-three format call signs now assigned to new Novice licensees WITHOUT distinction.

(6) Privileges will be all modes/emissions at 220 MHz and above. (NO 2 or 6 meter privileges.)

(7) Power should be limited to 250 watts PEP output. (This power level being deemed necessary to allow satellite operation.)

(8) The licensee shall not be the control operator of a repeater or an auxiliary station, and,

(9) The name of the license shall be the ''Communicator.''

Again, the above are the decisions of the ARRL Board of Directors -- how long it will take the League lawyers to draft the petition, and how long it will take the FCC to act (IF they act) remains to be seen. Keep tuned!

info: W5YI Report 8/1/89

The Raleigh Amateur Radio Society, Inc. (RARS), founded in 1969, has grown to be one of the premier radio clubs in North Carolina. Current membership exceeds 300.

The objectives of the club are to promote world wide friendship through Amateur Radio; to be of public service by providing radio communication in times of disaster, emergency, or civic need; to educate members in radio technique, and to assist in obtaining Amateur Radio licenses.

All persons interested in Amateur Radio, currently licensed or not, are eligible to apply for membership to the club.

Dues to the club are $10.00 per year (which runs from July 1 to June 30). Applications for membership may be obtained from any of the officers named below; from the newsletter editor, named on the facing column; or at any RARS Meeting.

Club meetings are held the first Wednesday of every month, 7:30 PM, at the Raleigh YMCA, 1601 Hillsborough St.

In addition to the many social and special events, the club sponsors a 2 m repeater, W4DW, on 146.04/64 MHz, and WA4PEN on 223.04 / 224.64 MHz. Both repeaters cover all of Raleigh, and most of the surrounding Wake County area. Auto-patch privileges are available on W4DW to duly licensed RARS members. Future plans call for additional repeaters on the 50, 146, and 450 MHz amateur bands.

1989 Officers:

President: Pete Thacher, N4HQZ
1108 Steinbeck Dr.
Raleigh, NC 27609
876-4073

Vice President: John Thomas, KK4JB
5228 Cedarwood Drive
Raleigh, NC 27609
782-1609

Secretary: Sue Meyer Parks, WB4USX
3 Custer Circle
Durham, NC 27713
544-7952

Treasurer: Tim Buehlmann, N4IQA
1314 Chaney Rd.
Raleigh, NC 27606
851-7738

The EXCITER is published monthly by the Raleigh Amateur Radio Society, and is mailed at no cost to its members.

Letters to the Editor, technical articles, items of interest to the ham community and guest editorials are actively solicited.

Any article published in the EXCITER does not necessarily represent the views of, the Officers, Board of Directors, Editor, or Society Membership, nor does publication thereof represent concurrence by the Officers, Board of Directors, Editor, or Society membership with the contents of the article.

Articles will be printed at the discretion of the Editor, and no article will be published unless it is accompanied by the name(s) of the person(s) submitting the article.

All copy must be in the hands of the editor by the end of the Board of Director's meeting on the third Wednesday of each month. Articles submitted for publication may be hand or type written, an ASCII file on disk (IBM or APPLE format), transmitted electronically via telephone modem, or on the ham bands using RTTY or PACKET.

Ham related items for sale by the members will be advertised without charge for one issue, but may be re-submitted as often as desired. These ads must be non-commercial in nature.

Commercial ads will be run in return for the following donations to the club:

	Single Issue	Full Year
Business Card	$5.00	$25.00
Quarter Page	$10.00	$50.00
Half Page	$20.00	$100.00
Full Page	$30.00	$150.00

(Commercial ads must be of "camera-ready quality," and obviously can not be sent via ham bands.) Due to the reprographic process used, no color copy can be accepted.

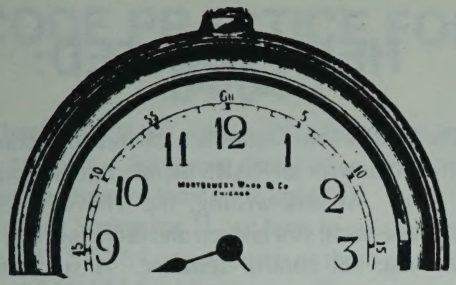
Advertisers are guaranteed a minimum monthly mailing of 250 copies.

Editor: Vince Yakamavich, AA4MY
220 Carriage Trail
Raleigh, NC 27614
847-8512 (Home)
850-5390 (Office)

SPECIAL SERVICE CLUB

Amateur Radio News Service

AMSAT



MINUTES OF THE MEETING

The regular monthly meeting of the Raleigh Amateur Radio Society was held Aug. 2, 1989 at the YMCA on Hillsborough St. President Pete Thacher, N4HQZ, called the meeting to order and welcomed the 85 members and 18 guests.

The first item of business was a recomendation from the Board at the July meeting to fund $2200. to cover the cost of basic support systems for the proposed 6M and 440 Mhz repeaters. The hardware equipment will be supplied by UHF/VHF SIG members until such time as RARS deems a further investment is required. The proposal passed the Board 5 to 3. Bruce, WA9NEW, made a motion to table this proposal until the Board reviewed it at the next Board meeting. He voiced concerns for authorization of voters at the July Board meeting. WA9NEW's motion was seconded and then it was brought to the members attention that the original recomendation to approve $2200.was never made into a formal proposal to the membership. At this time, Ed, WA4PEN, explained further the details of what the money would be used for. A motion was then made and seconded to spend $2200.for the repeater support systems. Following more discussion both pro and con, the proposal went to a vote: 41 in favor, 18 opposed. The motion passed.

The speaker for the evening was Ron Oats, AA4VK, who gave an interesting talk about his trip to Russia and the joint USA/USSR Dx-pedition he participated in.

Bob, K4MC, asked to take time out this evening to congratulate all the VE's who miss many meetings to help with exams.

Bruce, N4UOD, queried the group for interest in an upgrade/brush-up class. Several expressed an interest.

A few prizes were drawn. There being no further business, the meeting adjourned.

Sue Meyer Parks, WB4USX, RARS Secretary

WELCOME NEW MEMBERS!

A hearty RARS WELCOME is extended to 7 new members this month:

Glenn S. Guthrie, W4FTK, Raleigh
Frank H. Moore, KE4GY, Chapel Hill
Ron McCann, WB4OZL, Zebulon
Mrs. Lyn Pitegoff (no call, YET!), Raleigh
Craig Shulz, N4WFV, Knightdale
Scott Schulz, NU9Z, Knightdale
Wayne Shulz, N9GXF, Knightdale

As ever, we wish you folks welcome to our fine organization. We hope that you will chose to become "radio-active" and participate in the many activities and events that RARS offers. With the addition of your names, the club roster now shows **353 members**. Certainly a lot of friendships waiting to be made.

The best way we know of to become acquainted with the character of the club (or the "club characters") is to check into the nightly RARS net on 146.04/64!

Glad to have you all on board! **Again, WELCOME!**

AUTO-PATCH CODE TO CHANGE SEPT. 15.

Check your address label on this month's EXCITER for the new code. Note that ONLY those members who have paid their '89 / '90 dues (and whose license class allows 2 meter priviledges) will find the code on the mailing label. For those of you who have been putting off payin those dues, Treasurer Tim will gladly fill you in on the new codes when he receives your dues check.

Also, the RARS roster will be purged on October 15, as per the by-laws. Those members STILL unpaid at that time will be dropped from the membership / EXCITER mailing list.

Two thirds of the membership has ALREADY renewed. If you havn't already sent your dues to N4IQA, do it today!

VHF/UHF SIG REPORT

The regular monthly meeting of the VHF-UHF SIG was held on 10 Aug 89. Present were WA4PEN, KA5IEC, WA4MJF, KB4EXL, KM4UT, KB4VYP, K4RKI, N4PNO, AB4FY, WD4MYM, AB4OZ, and Lyn XYL of AB4OZ.

Ed opened the meeting at 1950q. AB4OZ gave a report on the last meeting of the two meter repeater SIG. There was general discussion of the two meter SIG meeting and the last RARS general membership meeting.

WA4PEN gave an update on the 1 1/4 meter repeater - there has been a receive pre-amp installed - evaluation and tweaking are ongoing - performance is good; - the RF amplifier (TX) and control package have not been installed. K4RKI led a discussion of controllers.

Sept 09 or 23 will be set aside for antennae and tower work for the control link and receive side of the six meter repeater.

WD4MYM volunteered his equipment and expertise to fabricate a mount for the 70 cm control link for the 1 1/4 meter and six meter repeaters. K4RKI donated an antenna for the control receiver.

Still we are looking for a transmit site for the six meter repeater. Jeff, WA1WXL, sent word that the crystals were ready for installation in the 70 cm repeater. Many options for the three repeaters were discussed and details will be forthcoming.

The door prizes were awarded: AB4FY won a 1 1/4 meter vertical gain antenna for fixed used (donated by K4RKI) and KM4UT won a "burpless cucumber" donated by WA4PEN.

Refreshments (strawberry pound cake and yellow cake with chocolate icing) were served. The social hour was enjoyed by all.

The next meeting will be September 14th.

I would like to thank KM4UT for taking the minutes this month, as I was unavoidably late. Remember to plan to come to the antenna party in September. Date to depend upon date of RARS picnic and/or weather.

73 de Sherry, KB4EXL

HELP WANTED:

The RARS Two Meter Net, the thread of continuity and information for all RARS members, can always use more help. At this writing, the Thursday evening regular net control slot is open and there is always room for alternate net control stations. A suggested net calling procedure for the net is available upon request. How about ringing my phone or letting me hear from you on the net. Become an NCS on the RARS net!

Jim, K4ABJ, Net Manager
787-7816

N4HQZ & W1HZQ Demo to Scouts

A tip o' the Boy Scout cap to RARS Pres Pete Thacher, N4HQZ, and his father, Cole, W1HZQ. They spent a good part of a day recently installing an antenna at a Troop QTH. Then Pete spent the better part of the evening explaining ham radio to the boys. Due to the jamboree being in progress in VA, only 8 to 10 scouts were present at the troop meeting, but Pete made several contacts with the boys, both on 2 meters, as well as on 40 -- including K2BSA/4, the "radio-voice" at the National Scout Jamboree. A most impressive demo for the scouts, who are in the 13 - 14 year old range. An ideal time to introduce them to Amateur Radio. A job well done Pete & Cole!

Bruce Chase, N4UOD

RARS MEMBER NEEDS HELP

Joseph Watkins, a RARS Member for 2 years now, is asking for help in getting up to 5 WPM on the code. Mr. Watkins is confined to a wheel-chair, so mobility is a bit of a problem. He's been tryin to learn on his own for almost a year ... but just can't seem to get it.

He lives in the southern Raleigh area -- Locust Lane in the 27603 zip code.

Perhaps what is needed is a team of 2 or 3 folks who could help an hour or so a week at their convenience...

Please contact Joe @ 772-5452.

CODE PRACTICE FOR 04/64

Thanks to Bruce Chase, N4UOD, there will be some assistance for those hams now on 2 meters, wishing to improve their code speed.

Starting September 11, we hope to put code practice on the RARS 04/64 repeater two or three evenings per week, at 9:00 PM for 15 minutes. Plans are to send at 5, 9, and 13 WPM. Text, tone, and character spacing will be similar to that used at the RARS exams. If you can copy these practice messages, you should be able to handle the code tests given at RARS! Plans are still in the formulative stage ... if you have any thoughts or suggestions, contact N4UOD @ 781-0582.

The intent of this effort is to provide practice without requiring that all interested meet at a single location. Those currently on two can brush up and improve their code speed from the comfort of their own homes. Those not yet on two might want to contact WA9NEW or AB4EL to find out about converting an inexpensive "Weather-Cube" to monitor '64. I'm told that the conversion is quite simple, and works just fine.

New FCC Rules in Effect September 1st!

The much talked about new Part 97, which deals with the Amateur Radio Service goes into effect September 1st. Every amateur should have an up to date copy to know what rules and regulations we are bound by.

The ARRL is offering new rule books for $9.00; W5YI is offering re-prints of Part 97 for $2.00. RARS will have about 50 or so copies for **FREE** at the September meeting. If can't make the September meeting, just mail AA4MY a 39 cent stamp, and a copy will be sent directly to you via the U.S. Mail.

It is with deep regret we note the passing of the father of N4SST and grandfather of N4SSX, the result of an attempted burglary in Angier. Our sincere condolances are offered to Milton and Andy, and the entire Blalock family.

Homebrew SIG Meeting

The next homebrew SIG meeting will be at 7:30 PM on September 13th at the QTH of KM4BU, (420 Oak Ridge, Cary). Topics for the meeting will include plans for an upcoming homebrew projects exhibit, and the SWR meter project.

Anyone who has an interest in homebrew of Amateur Radio equipment is encouraged to attend. For more information, contact James, KA5IEC @ 781-6592 or Walt, KM4BU @ 481-3856.

AMATEURS MAKE GOOD TARGETS!

When, in early June, the FCC Field Operations Bureau of the FCC needed some known "targets" to test new direction finding gear, they called the ARRL for help. The ARRL provided a list of amateurs living near selected major cities.

Ultimately, the FCC was able to pinpoint target stations quite accurately. Tests were run in 6 different cities on June 13, using state of the art RDF gear manufactured by Zeta, which uses correlative interferometry techniques. The equipment, which is transportable, to DF anywhere between 1.5 and 1000 MHz. A bearing taken by just one unit can give an indication of location. Previous direction finding apparatus usually requires at least 2 cross findings.

tnx ARRL Letter, 7/28/89

Ohm and Volt Values to Change!

Effective in January 1990, the ohm and volt values will change worldwide, which means ultra-sensitive meters will have to be re-calibrated! The volt will change 9.2 parts per million ... while the ohm will change about 1.7 ppm, according to the National Bureau of Standards. The change is the result of four different values being used world wide, and the discovery that the value, last adjusted in 1972, was slightly wrong. All countries will make the change simultaneously.

W5YI 8/1/89

TTNTT

(Technical Topics for Non Technical Types)

by wa9new

On VHF/UHF Propagation

In the past couple of TTNTT columns we've talked about the difference between a "formula" and an "equation". One significant factor about an "equation" is that it MUST be dimensionally correct. Another is the use of the "=" sign. In an "equation", what is on the left of the "=" must "EQUAL" what is on the right. If what is on the left is "just about" the same as what is on the right, we don't have an equation, we have an "approximation".

How about the "formula" for the distance to the "radio horizon". The ARRL Handbook tells you that the distance to the "radio horizon", in statute miles, can be calculated from :

$$D = \sqrt{2h}$$

where "h" is the height of the antenna in feet and "D" is the distance in miles. Now, a few questions should come to mind:

1. How can "miles" EQUAL the square root of "feet"?
2. Why "2 x h"?
3. Does the "2" have a dimension of length? "Miles squared per foot" would result in a dimensionally correct equation. (Remember: We found the "468" in the "formula" for the length of a half wave dipole had dimensions of "millions of feet per second".)

I'll answer the last question here: No, the "2" is a pure number with no dimensions! Then can miles "=" the square root of feet?

Where does this "formula" come from? The rest of the answer appears elsewhere in this issue.

New Call:

Janet Payne, (XYL of Mike, KM4UT), is now **N4WPX**. Janet aced (100% correct) BOTH writtens for her Tech license at the RARS tests in July. Good to see another RARS family get on the air!

Kinder, Gentler League?

ARRL Controller Larry J. Shima, W0PAN is no longer with the League. He was terminated after the ARRL ended the year with a deficit of between $500,000 and $1 million. He will be replaced by a Chief Financial Officer who, (with Dave Sumner, K1ZZ) will report directly to the ARRL Board.

League advertising manager, Bruce O. Williams, WA6IVC, resigned in sympathy to the way that the W0PAN firing was handled.

Mr. Shima, an ex-Dakota Division ARRL Director, was considered to be the father of the VEC program. He made a motion in 1971 to study the feasibility of petitioning the commission to establish an FCC certified Volunteer Examiner program.

W5YI Report 8/15/89

New Prefixes In The Pacific

The ITU has allocated the call sign prefix V6 to the Federated States of Micronesia (formerly one of the users of the KC6 prefix). Amateur stations will use call signs V63AA through V63ZZ.

The call sign prefix V7 has been allocated to the Republic of the Marshall Islands (formerly KX6). Amateur stations will use call signs V73AA through V73ZZ.

tnx ARRL Letter, 7/28/29

2 METER REPEATER WORK PARTY

SEPT 23 9:00 AM - NOON

As RARS pays no rent for it's tower space, we feel it only proper that we offer some labor at the tower site in maintenance. This first work party will concentrate on the trimming of weeds & under-growth. Plan on bringing your gloves, weed-whips (pref. gas powered) & bush hogs. Also looking for portable sprayers we can load with ROUNDUP. Location @ Strickland & 6 Forks in north Raleigh. Talk in on '04/64. Lets get a good showing of members!!

AA4MY

SWL-ing

Ever wonder what to do with the "General Coverage Receiver" built into so many of today's ham transceivers?? The following list might give you a hint...

ANGOLA--The unidentified Angolan station reported two weeks ago is probably Emissora Provincial de Cuando Cubango, which has been heard at 20:45 hours on 4872.2 kHz. This station is listed in the WRTH as operating irregularly on 4780 kHz. See also Mozambique.

BOLIVIA--Radio Perla del Agro in Cobija, Pando is a new station, which has been heard from around 23:20 hours until sign off at 02:04 hours on 4600 kHz.

BOTSWANA--Radio Botswana has immediately leaped in to use 4830 kHz, recently vacated by Africa No. 1 in Gabon. It's been heard there 18:30-20:00 hrs. This would seem to replace 4820 kHz.

BURUNDI--Radiodiffusion du Burundi has been heard with programs in French around 19:15 hours on 3300 kHz and around 18:20 hours on 6140 kHz.

CANADA--CKZU, the CBC station in Vancouver on 6160 kHz, announces the new sign on time of 12:30.

COLOMBIA-- Caracol, Bogota, which was reported to use 5075 kHz, now seems to have moved to 6075 kHz. Heard around 08:00 hrs but mixed with Deutsche Welle on the same frequency.

CZECHOSLOVAKIA--Radio Prague in English at 01:00-02:00 and 03:00-04:00 uses the new frequencies of 13715 and 15540 kHz.

GUAM--AWR-English programs from AWR on shortwave are now broadcast: at 00:00 on 15125, 10:00 on 13720, 16:00 on 11980 and 23:00 on 15125 kHz. On Saturdays and Sundays also at 02:00 on 11700 kHz.

EQUATORIAL GUINEA-- Radio Africa is now scheduled.17:00-23:00 hours on 7190 kHz. Africa has been observed with a religious program and fair strength at 21:00 hours on 7189 kHz.

From July 1st Radio Africa will also operate under the name of Radio East Africa. These transmissions are scheduled to be on the air from 05:00 hours to 14:00 hours on Saturdays and Sundays on 9585 kHz, targeted to Kenya, Uganda and Tanzania.

GABON--On June 18th Africa No. 1 was observed on 9580 kHz at 19:00 hrs. This frequency, which was in parallel with 15475 kHz, appears to replace 4830 kHz, which was used 05:00-06:00 and 16:00-23:00 hrs.

INDONESIA--The Radio Republik Indonesia Programa Nasional, Jakarta, now broadcasts on 15155 kHz between 10:00 and 11:00 with 7270 and 999 kHz in parallel. Between 17:00 and 22:30 the frequencies are 3275, 4775 and 6550 kHz.

IRELAND--Radio Dublin is now back on the air 24 hours a day on 1188 and 6912 kHz.

MOZAMBIQUE--Radio Mozambique has been observed with the A program from 19:55 hours to sign off at 22:07 hours on 4872.4 kHz with fair to good strength with popular music.

PARAGUAY--Radio Nacional de Paraguay has been heard with soccer football around 17:45 hours on 6025 kHz.

PHILIPPINES--Radio Veritas Asia can now be heard in English 15:00-15:30 hours on 11740 and 15445 kHz and 01:30-02:00 hours on 15320 and 15360 kHz.

POLAND--Radio Polonia has introduced a program in German at 05:30-06:00 on 5995, 7270, 9675 and 1503 kHz.

TURKEY--The Voice of Turkey can now be heard in German 16:30-17:25 hours and 19:30-19:55 hours on 9825 kHz. There are also broadcasts in English from the Voice of Turkey 20:00-21:00 hours and 22:00-23:00 hours, both on 9825 kHz.

YUGOSLAVIA--Radio Yugoslavia is noted on new 21555 kHz with sign on in Serbo-Croatian at 07:00 on a Saturday. Radio Yugoslavia in German in 16:30-17:00 is on new 7215 kHz with 9620 kHz in parallel while German at 19:30-20:00 uses two new frequencies: 6100 and 7215 kHz with 9620 remaining in parallel.

Sweden Calling DXers is the world's oldest radio program for shortwave listeners. Radio Sweden has presented this round-up of radio news, features, and interviews on Tuesdays since 1948. RS broadcasts to North America: 15:30 hrs on 17880 and 21610 kHz 03:00 hrs on 9695 and 11705 kHz

(tnx, KB4VTH's computer BBS)

GM Issues Mobile Radio Instructions

General Motors has issued a set of Radio Telephone/ Mobile Radio Installation Guidelines to the public and it's dealers. While amateur radio is not specifically mentioned, a photograph in the service bulletin shows a mobile VHF - HF ham radio multiple transceiver installation.

GM warn "Certain radio telephones or land mobile radios or the way they are installed may adversely affect the vehicle operations such as the performance of the engine and driver information, entertainment and electrical charging systems. Expenses incurred to protect the vehicle systems from any adverse effect of any such installation are not the responsibility of General Motors Corporation.

Some pointers:

1. Transmitters should be located on driver's side in trunk, under dash or on transmission hump.

2. Antennas should be on roof, center of rear deck lid, rear bumper or (if glass mount) should be high on the center of rear window. Locate antenna as far as possible from vehicle electronics and wiring. "Each vehicle model and body style reacts to RF differently. When dealing with an unfamiliar vehicle, it is suggested that a magnetic mount antenna be used to check the proposed antenna location for unwanted effects on the vehicle (prior to permanent installation.) Antenna location is a major factor in these effects."

3. Always use high quality coax cabling of at least 95% shield coverage ROUTED AWAY from the ECM (Engine Control Module) and other electronics modules. Do NOT route feedline with any other vehicle wiring.

4. It is important that the antenna be properly tuned and reflected power be kept to a minimum (VSWR < 2:1)

5. Radio power leads should be connected directly to the battery itself, including the ground or jump-start block on vehicles so equipped. Leads should be #10 AWG wire or larger, twisted if possible. The ground wire should not be attached to the body at any point. Appropriate in-line fuses for both the positive and ground leads should be located as near the battery as possible. If multiple transceivers are installed, power leads should be connected to buss bars. This reduces the number of wires running under-hood.

6. Power leads should be brought through a grommet on the driver's side firewall. As much distance as possible should be maintained between radio power leads and vehicle modules and wiring.

7. Should vehicle problems develop, radio operation should be terminated immediately until the source of the difficulty is determined. Possible causes generally include: power leads connected to points other than the battery, poor antenna location, transceiver wiring too close to vehicle electronic modules or wiring ... and/or poor shielding or connectors on antenna feedline.

Although GM says their vehicles have been designed and extensively tested for immunity to known sources of RF energy, they warn "... it is impossible to test for every combination of RF source or installation."

If persistent vehicle operation problems are encountered, write to:

EMC Dept. - MR
Building 40
General Motors Proving Ground
Milford, MI 48042-2001

Provide make/model of both vehicle and mobile transceiver ... include transmitter location, power level, frequencies operated and antenna type / location. GM also needs the vehicle ID number, VIN to process your request. ***W5YI Report 7/15/89***

JARS 147.87/27 RPTR TO BE WIDE AREA; 146.37/97 RPTR TO BE ADDED IN BENSON

The Johnston Amateur Radio Society (JARS) has been busy these days working on some new repeaters. A GE MASTR II running 50 W out, will be crystalled for their existing 87/27 pair, and will be moved to the 900 foot (!) platform of WPTF's TV towers.

Their existing machine will be re-crystalled for 146.37/97, and will serve as a more local repeater for those folks in Johnston / southern Wake counties.

tnx "The Official Organ", AK4H, Editor

AMERICAN LEGION COMPLEX
301 N., Benson, NC 27504
8:A.M. to 4:P.M.

PRIZES!

ADMISSION $5.00 AT DOOR

$4.00 ADV. REGISTRATION

JARS FEST 89

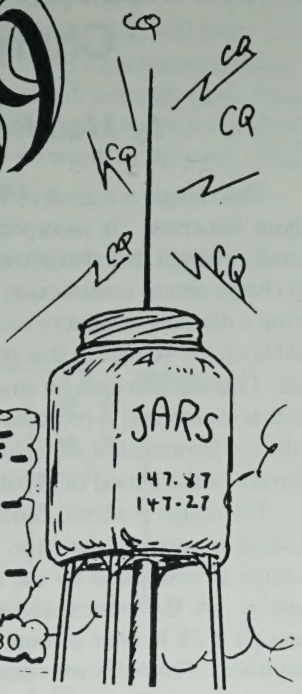
Sunday October 1, 1989

ENTIRE EVENT HELD INDOORS

SET UP 7:AM.

TRADE-
SWAP-
Sell-

AUCTION AT 2:30



☆ GREAT FUN — ☆ TABLES FOR RENT

GREAT FOOD —
GREAT PRIZES

☆ Talk in on 147.87/147.27

☆ TEST TABLE FOR CHECKING YOUR BARGAINS

AMATEUR RADIO EXAMS (Courtesy RARS VEC)

By preregistration until September 23. Send completed Form 610, photocopy of your current license, code/theory Certificates (if applicable) indicate highest class of license you desire to be tested for, and a check or money order for $ 4.75 Payable to JARS to:

Vince Yakamavich, AA4MY
220 Carriage Trail
Raleigh, NC 27614

Tel. (919) 847-8512

☆ TO PREREGISTER SEND $4.00 AND S.A.S.E TO

JOHNSTON AMATEUR RADIO SOCIETY
PO BOX 1154
SMITHFIELD N.C. 27577

Phones (919) 934-0486 or 894-5479

☆ 7: TO 10: PM EVENINGS

☆ FREE PARKING

An Automatic Gell-Cell Charger

by Matt Reynolds, KB2ACE

This charger is a result of WA9SZL's recent program about batteries. It incorporates the essentials of a battery charger, but also allows one to leave his battery on charge almost continuously. The charger will slowly bring a discharged battery to approximately 13.4 volts and keep the voltage at that point, charging at a trickle rate. Construction time for an average builder (including parts procurement) is probably about 8 hours. I adapted a design presented in the HANDBOOK, and built this charger of the period of about 2 weeks this summer.

The design is a basic Zener regulated power supply, feeding a control transistor. This transistor's base voltage is controlled by the current drawn from the supply. A 0.4 ohm resistor's voltage drop is fed through a 25 K ohm potentiometer to a 2N2907 DC amplifier. The collector voltage is put through a 100 ohm resistor to the base of a 2N3055 transistor, which acts as a variable resistance in the positive supply line.

None of the parts are especially critical except R1, the 0.4 ohm resistor, used in the current sense circuit. This resistor is homemade from approximately 6 feet of #28 enameled wire, and a 10K ohm 10 watt resistor. First remove the enamel insulation from the wire with a piece of fine sandpaper until approximately one half inch is clean. Then wrap this end around one of the leads of the 10K resistor, right near the body of the resistor. Solder this connection, and then scramble-wind the remainder of the wire around the resistor. When approximately one inch is left, remove the enamel as before, and connect this end to the opposite lead of the resistor. Then, coat the assembly with glue (Elmer's white glue is OK). Leave the resistor to dry.

Assemble the rest of the circuit on either perfboard or a PC board. Try to make the layout resemble the schematic diagram. Use #18 stranded hookup wire, with Teflon insulation if you can find (and afford..) it. Remember that the cases of the power transistors and the Triac cannot touch any metal objects.

The triac needs a small .5 inch by 1 inch aluminum heatsink for proper operation. The 2N3055's need substantially more heat sinking area. I used a steel box with an aluminum heatsink along the back. Of course, I used mica insulating washers and thermally conductive grease to mount the 3055's. Heatsink the Zener diode with two 1" pieces of heavy solid copper wire soldered close to the body.

Even with the heatsinking, things get quite warm on the inside; hence the fan. Not much air flow is needed, and the fan used supplied much more than needed (and made quite a racket in the process). I decided to add an adjustable speed control for the fan.

Once construction is completed, inspect the charger visually to check for cold solder joints, solder bridges, and other problems. Now, turn the 25K potentiometer to about 3/4 the way to the R1 end, and the 10K pot to the zero resistance end. Power up the charger no-load, with a volt meter on the output terminals. It should read about 13 volts DC. Then, connect a 1 ampere load to the output terminals in parallel with the meter. The voltage should drop. Now, adjust the 25K pot for maximum voltage reading on the meter. Next, adjust the 10K pot for the desired fan speed WITHOUT touching the Triac's heatsink because it has 120VAC on it.

The charger is now ready to be used. It takes my unit approximately 24 hours to fully charge a 12V 38AH gell-cell.

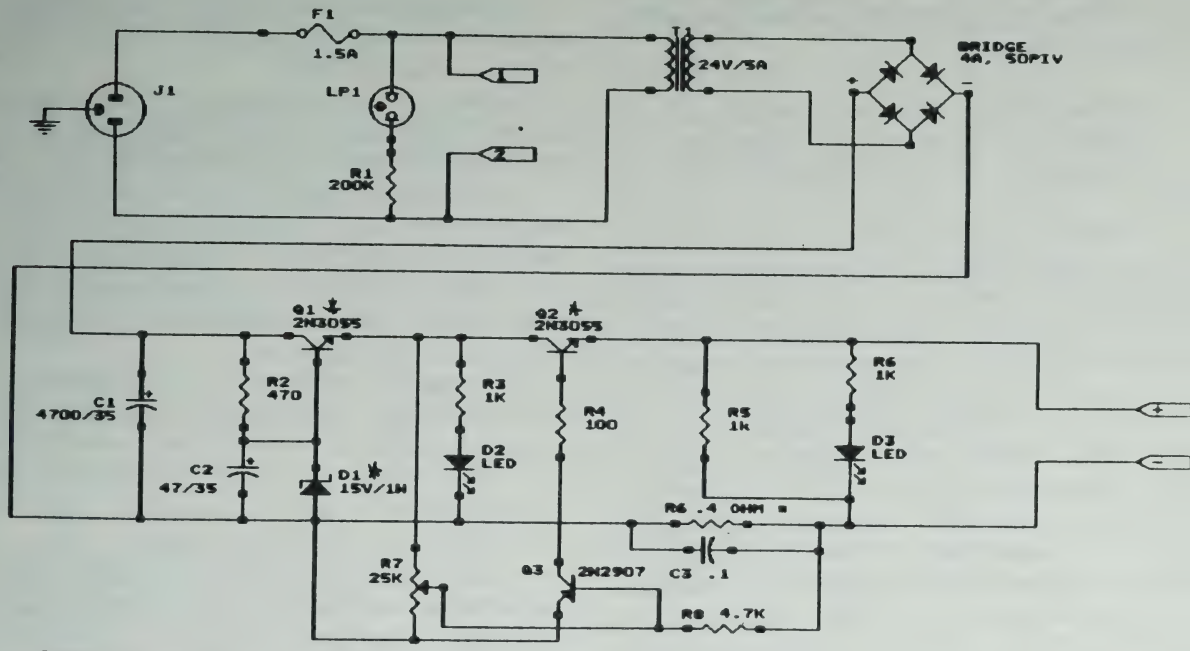
The following parts list shows the current Radio-Shack Part number & cost.

QTY	Stock No.	Description	Cost
1	278-1258	3 Prong AC line plug	2.99
1	270-1274	1.5 A Fuse	0.79
1	270-1281	In-line fuse holder	0.99
1	275-602	SPST Toggle Switch	1.29
1	273-242	32 CFM Fan	15.95
1	273-1512	Transformer	9.49
1	278-1345	Enameled Magnet Wire	4.99
1	271-1325	Resistor, 2.2K 1/4w	0.39
1	271-019	Resistor, 470 ohm 1/2w	0.19
1	271-1321	Resistor,1K 1/4w	0.39
1	271-1311	Resistor, 100 ohm 1/4w	0.39
1	271-1330	Resistor, 4.7K 1/4w	0.39
1	271-135	Resistor, 100 ohm 10W	0.99
2	271-218	Resistor, 10K, 1/4w	0.69
1	272-1022	Cap, 4700 uF / 35V	3.59
2	272-134	Cap, .047 uF / 500v	0.98

	(parallel to substitute for .1/500v)		
2	272-1101	Neon Bulb, NE2	0.69
1	276-041	LED	0.69
1		Zener Diode, 15V 1W (Purchase before 1990 -- will not be stocked next year!)	0.99
2	276-2041	2N3055	3.98
1	276-2023	2N2907	0.59
1	276-2000	Triac, 6A / 400 V	1.49
1	276-1171	Diode Bridge 4A, 100 PIV	1.59

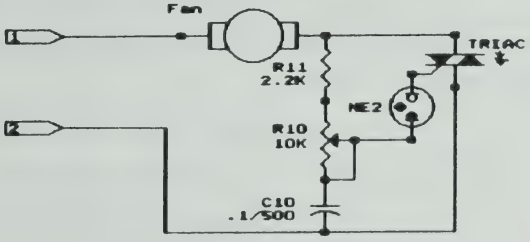
Total "New Cost" $55.97, excluding housing.

My advice is to do as I did; scrounge parts. I bought a used, broken power supply at a hamfest for $0.50. It contained all but about $5 worth of the parts. That's a SUBSTANTIAL savings!



Capacitors in MF unless marked.

T1 - 120V primary, 25V, 5A secondary
BR - 4A, 50PIV Bridge Rectifier
D1 - 1N4744 15V, 1W Zener
R1 - 6'1" #28 enamel on 10 W, 10K Resistor
Triac - 6A, 400V (RS 276-1000)
* - Heatsink



MAKING ANTENNAS PLAY

By Steve Modena AB4EL

In this article I will discuss operating a delta loop or loops at resonance. This allows operation without a transmatch.

The standard formulae for calculating the circumferential lengths of a three element delta- or quad- or circular-loop array are:

Reflector(FT.) = 1020 / Freq-in-MHz. (1)
Driven (FT.) = 1005 / Freq-in-MHz. (2)
Director(FT.) = 975 / Freq-in-MHz. (3)

Formula (2) has been used to calculate the dimension of a loop to be used in solitary mode (no reflector; no director). Antenna elements in close proximity interact to modify each other's self-impedances. Should the fudge factor "1005" be used in all circumstances?

An article by W4MB (R.P. Haviland, "The Quad Antenna: Part 2, Circular and Octagonal Loops" in Ham Radio Magazine, June 1988) offers some guidance. Mathematical simulation of circular loops indicates that a loop of 0.7 wavelength circumference equals the standard dipole for gain. Gain increases as loop circumference increases to about 1.5 wavelengths. Then gain decreases. The "1005" factor represents 1.021 wavelengths. The slope of the curve in that neighborhood is shallow, so the exact number does not affect gain greatly.

One may infer from another graph that a 40 meter wire loop would be close to resonance using the "1005" value. But a 10 meter loop made with coax (rather than wire) would be SHORTER than needed to operate at resonance. We need (approximately):

Length(FT.) = 1045 / Freq-in-MHz. (4)

(This is similar to the results presented below.) A two meter loop made from large diameter tubing might have to be 1.15 wavelengths:

Length(FT.) = 1130 / Freq-in-MHz. (5)

Loop length for resonance (like other antennas) is related to the ratio of the antenna length and conductor diameter.

Another graph shows radiation resistance of a loop at resonance to be around 120 to 140 ohms (as reported in my July article). For a 50 ohm feed line the minimum SWR would be over 2:1.

What effect does adding a reflector and then a director have on antenna parameters? The following is my experience for a 10 meter antenna mounted at 20 feet.

A delta loop made from RG-59U (using the braid) and cut for 28.4 MHz according to formula (2) was resonant at about 29.5 MHz.

Adding a reflector loop spaced 0.125 wavelength from the driven element shifted resonance to about 28.07 MHz. With a 50 ohm feed line the SWR was 1:1!

Adding a director loop spaced 0.125 wavelength from the other face of the driven element, shifted resonance to about 28.35 MHz. Antenna resistance was about 35 to 40 ohms. The resonant frequency was increased to 28.4 MHz by shortening the driven loop without touching the other loops.

Formulae (1), (2) and (3) were very reasonable for these THREE loops. In this case the formulae for two loops ought to be:

Reflector(FT.) = 1008 / Freq-in-MHz (6)
Driven(FT.) = 993 / Freq-in-MHz (7)

Remember that these apply to the antenna that I constructed, the materials used, the place mounted and the spacing. These may be significantly different in another situation!

A 40 meter three-element delta loop array made from #14 wire, mounted with loop bases 5 to 10 feet above the ground and with elements spaced 0.15 wavelengths, exhibited resonance about 125 KHz below the frequency used in formulae (1), (2) and (3). With a 50 ohm feed line the SWR was 1:1. These results were duplicated at two different physical locations over two years.

I conclude that two and three element delta loops can be adjusted for "no tune" operation through a 50 ohm line. Operational bandwidth will probably depend more on the VSWR shutdown characteristics of the transmitter used than on the gain-vs-frequency characteristics of the antenna.

P.S.

for Public Service

de Bruce, WA9NEW

Given that N4SSU has been somewhat pre-nuptially preoccupied in recent weeks (and might be more preoccupied post-nuptially?), I'd agreed to take some interim tasking in this department. We've got two events coming up which might otherwise be in Edward's bailiwick:

1. The League announced the "First Annual" Amateur Radio Public Awareness Day a while back. It'll be on Saturday, Sept. 16. Tom, KM4LB, a new RARS member and also a member of the Cary Amateur Radio Club, has "taken the bull by the horns" and is heading an effort to have displays in South Square Mall in Durham, Cary Village Mall, and Crabtree Valley Mall in Raleigh.

We've coordinated with the folks at Crabtree and WB4INM, past Public Service Director for RARS, is signing up volunteers and looking for good ideas. Give Dianne a call and help boost the best, Amateur Radio and RARS.

2. In case you hadn't heard, the North Carolina State Fair opens on Friday the 13th of October (I sure hope that isn't an omen!) and runs through Sunday, October 22. Why should RARS members be interested? Because every year, for many years, RARS has coordinated 300 "man-hours" of communications support to the American Red Cross at their First Aid Station at the Fair Grounds.

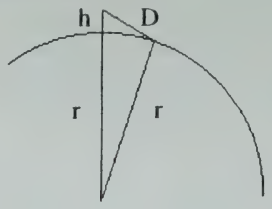
Two operators per five hour shift, three shifts per day, ten straight days! Get in on all the behind the scenes action! Fairgrounds Security, Raleigh Rescue, Ride Inspectors, dispatched First Aid teams; everything from tummy-aches to stabbings and shootings, it's all at the State Fair. Call W4YC and reserve your time slots NOW!.

• • • •

TTNTT SOLUTION

by wa9new

The question was about the "formula", $D = \sqrt{2h}$. That's supposed to give the distance to the "radio horizon" in miles as a function of antenna height in feet. Where does it come from? Take a look at the diagram below and think Pythagoras. (You do remember him don't you? A long-haired, bearded leader of a hippie commune in Southern Italy.)



Here we have right triangle where "r" is the radius of the Earth, "h" is the height of the antenna, and D is the "distance to the radio horizon". But note that the path of propagation is a straight line, or "line of sight". From Pythagoras:

$$D^2 + r^2 = (r + h)^2$$

Solving that for "D" yields:

$$D = [(r^2 + 2rh + h^2) - r^2]^{1/2}$$

Let's simplify what's on the right and consider that "h" is one whole bunch smaller than "r", so we throw out the h squared. That leaves us:

$$D = \sqrt{2rh}$$

But it's not an "equation" because we've made a simplifying assumption. Now, what about that "r" that's still in there?

The mean radius of the earth is approximately 3,960 miles. If we express "h" in units of feet, we'd have h/5280 to get both r and h in miles, or:

$$D \text{ "=" } \sqrt{2rh/5280}$$

And D will have the desired unit of miles. Now, if r = 3960, r/5280 = 3960/5280 and the square root of that is about .866. By eliminating this small term, the "formula" $D = \sqrt{2h}$ will produce a result which is about 15% longer than the "line of sight" geometry shown above. But consider that under "normal" (read: Standard Atmosphere) conditions, electromagnetic energy in the VHF and UHF portions of the spectrum curves downward with a radius of curvature of about 4/3 the radius of the earth. Energy leaving the antenna at an angle a bit above the "line of sight" ray will intersect the earth farther away from the antenna than a straight line anyway.

So this "formula" is dimensionally correct (as an equation must be) but produces only an approximation of the distance to the "radio horizon".

(An historical note: An observer standing on a beach with "his" eyes 6 feet above the water can see the ocean surface to a distance of 3.46 statue miles. How many nautical miles is that? Very close to 3.00! Want to guess where the old standard territorial limit of 3 nautical miles came from! I must note the use of the chauvinistic "his". But when nations began to stake out territorial water claims, there weren't very many women serving as lookouts!)

HAM LICENSE PLATES

Have you been putting off getting your personalized Ham Plates for your car? You think you have to wait till your present registration runs out? This is not the case.

Call the Division of Motor Vehicles in Raleigh at 733-7510, and ask them for the Amateur Radio License Plate form -- they will mail it to you. Simply fill out the form, and mail with $10 check or money order. It takes 3 - 4 weeks for the tags to arrive, but they will come with stickers on them for the remaining time of your registration. Then you simply renew the stickers each year as normal.

tnx, DFMA LINK, N4SHX, Ed.

For Sale:

Santec ST-20T 2 meter H.T.;
low use; bought at '88 RARS fest -- $250. 00
Call Bruce, WA9NEW, @ 779-0266

Quick N' Easy: J-Pole for 10

by Gil Frey, K4JST

"I just finished using Ten Meters for a demonstration of Amateur Radio to a group of Boy Scouts. Nice band with plenty of activity and long impressive skip when it is open. Just the thing for a short demo. My first problem was rigging an antenna. A dipole is certainly easy enough to cut and put together, but it does require two lines for support. A vertical is easier to erect and is not as affected by height above ground, if it uses a ground plane. The quarter wave ground plane would work, but the radials spread to cover a fair amount of area. What I really needed was a J-Pole.

I use a wire J Pole antenna on Two Meters for emergency and backpacking situations, why not scale it up in size for Ten Meters? First problem was to select one of several dimensions that are floating around for the Two Meter J-Pole. I chose the largest, scaled them up for 10 meters, and then pruned using an RF noise bridge, to save some time.

Construction as follows:

1. Cut a piece of 300 ohm TV twin lead to 280.5 inches. Strip 3/4" of insulation off one end, and drill two 1/16" holes near the opposite end to hold line for hanging the antenna. Cut a quarter inch wide notch through just one of the wires of the twin lead at a point 78.75" from the end with exposed wire.

2. Cut a second piece of twin lead 8" long. Strip 3/4" of insulation off each end. Twist together wires at one end and solder.

3. Twist together the exposed wires from the short and long pieces of twin lead as if to make a splice.

4. Connect the center conductor from a piece of RG58 coax to the wires on the long side of the twin lead, and connect the outer braid (shield) to the side having the notch. Solder. Tape this junction to protect the wire and to reinforce this joint.

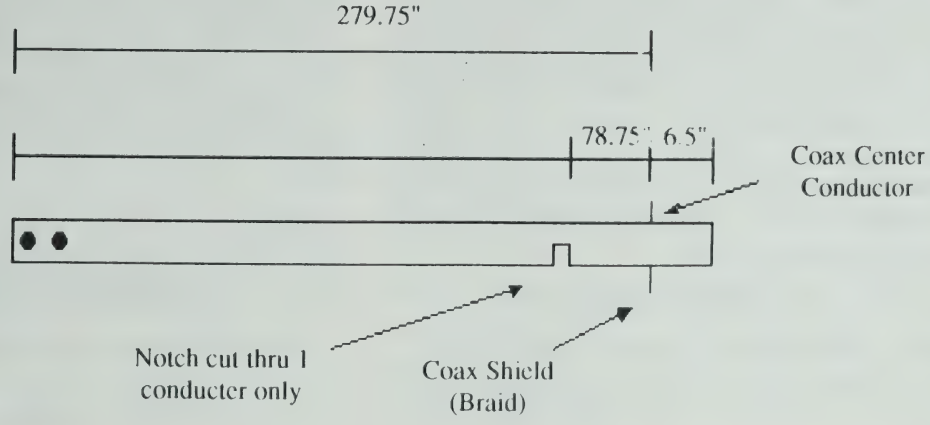
5. Attach a string throught the 1/16" holes and toss over a tree branch.

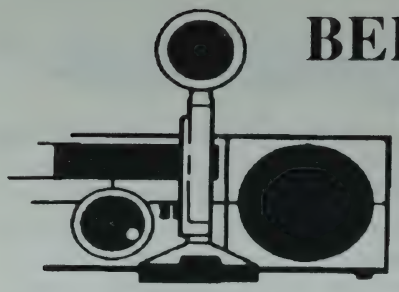
On the air you go.

How does it work? Well the first contact for me was an F6 in France, the next in West Germany, and then a mobile near Amarillo, TX. I used a transmatch, but when I connected it direct to my old Omni, the SWR as 1.4:1, and the rig fed it directly with no problem. I decided not to waste time tuning it and have been using it with no transmatch ever since. The project took an hour to round up the material and do the cutting. Cost is about $2.50, not inclding the coax. Guess I will cut one for 12 meters next."

(Ed. Note: I have not tried this, but I do know vertical 10M antennas are said to out perform dipoles. The J-Pole idea on 10 sounds like a good one. Any of you antenna minded RARS-ite experimenters care to give it a try?? Let me know your results for the EXCITER!)

via Foundation for Amateur Radio's AUTO-CALL & ARNS





BERT'S BEAT

"Bert" Bailey, W4FMN

NUMBERS-NUMBERS-NUMBERS

Some are fascinating; some are dull. Hopefully, learning something every day, I am fortunate in having contact with many young minds, -- students that is. And most of them try real hard to learn all about electronics. With the craze on computers these days, most of them lean, or even sit on their hand calculators. But we of the OLD SCHOOL who were not weaned on these objects d'art still have a thing going with calcuating out problems in our heads. A good case in point is when I accidentally discovered that the reciprocal of 3.16 is .316 -- how come?

Well, I was working out a problem on the blackboard and wound up with the task of figuring the reciprocal of the square root of 10. This chore is fairly repitious in the electronics field, especially commo; so I knew that the square root of 10 is 3.16. But, sand-bagging the students, I did this calculation and let them solve for the reciprocal of said number. They said it was .316. This looked rather odd so I stomped on them and said give me a correct answer. They came back with .316. So then I realized I had yet another short cut to mental skills, i.e. Anytime you have the root of 10 to an odd exponent in the denominator, the number will consist of the digits 316 multiplied by n where n=10E-3, 10E-4, 10E-5 ... for successive odd exponents 1, 3, 5, ... I have not worked out an algebraic term for the expansion but perhaps when you get beyond 10E5, the calculator wins or thinking on your feet could, by then, be dangerous -- or at least non-profitable.

Some of our RARS members may wonder what all this has to do with ham radio. Well, like it or not, ham radio IS electronics, and electronics IS mathematics. Maybe we can rest awhile on this simple shortcut and mention any other gems as they come along. By the way, ever wonder how you can multiply any two numbers together that each end in the digits 25???? Well, thats enuff fer now. Maybe next issue....

US HAM LICENSES: $30?!?!

The House Energy and Commerce Committee has voted a 12.6 percent across the board increase for the FCC's so called "cost of regulation" fees. There is a parallel move afoot in the Senate Communication Subcommittee, and the ARRL is closely monitoring both of these. The League is, of course, dismayed that the subject of amateur license fees has been raised so suddenly, and without opportunity for public input.

The Amateur Radio Service, currently exempt from FCC fees because of its non commercial, public service use, would begin a $30 fee for new licenses, modifications, renewals, reciprocal permits and renewal or modification of club, RACES or military recreation station licenses.

Collection of the fees would present a burden to the amateur community since all applications for new and upgraded licenses now pass through volunteer examiners before forwarding to the FCC. If enacted, VE's could be required to collect the fee for the government.

The anticipated $42 million generated by the fees would not go to the FCC directly, but to the general treasury to reduce the national deficit.

At their board of directors meeting, the ARRL adopted a policy to oppose any fees for amateur radio Station and Operator licenses that exceed the actual cost of administration of the service. In the upcoming fight, the ARRL will be using the Capitol Hill resources it developed during the recent fight over 220 MHz.

Be prepared to write YOUR congressman, and let him know how YOU feel about this. More to certainly follow.

W5YI 8/1/89

WANTED:

Articles of interest for ***YOUR*** newsletter!

Contact ye olde editor!

QSLing

Steve Modena, AB4EL

The other day I received a QSL card from Gena UA9MA in Omsk, (Asiatic) USSR. It arrived in a first day cover envelope. He wrote on the card "Many thanks for hamfest invitation!!!" Hamfest? Yes, the RARS Hamfest. I had direct QSLed with my QSL, my little bibliography sheet, and the RARS Hamfest mail-out flyer. I figured SOMEONE in Central Asia would enjoy it.

It costs $.45 for 1/2-oz. airmail to anywhere in the world. I make the world postal union carry the full weight. I routinely include things like a beautiful color North Carolina post card ($.20 at DJ's on Hillsboro St., $0.75-$1.00 elsewhere), past issues of the GATEWAY (an ARRL digital newsletter), a couple of pages from a past Ham Trader Yellow Sheet, etc.

I direct QSLed to George HC1NDXC ('N' for Novice) in Equador (a new one for me running 4 watts on 40 SSB). He needs 100 DX QSL cards in order to upgrade. So he got mine sooner, rather than later, i.e. VIA BURO. I stuck in a Worked All States rules and application set because he had earlier tried--unsucessfully--to ask a DX Net Control station about WAS.

I've heard some people disparage receiving "so many" SWL cards through the bureau system. I answer every one direct because many of these people ALSO must collect a certain number of listening confirmations before they are allowed to get a ham license. Besides, thanks to SWLs,I know that I can be heard in certain parts of the USSR that have eluded me thus far.

It's OK to include a "green stamp" to some (but not all) countries to help out with the return postage for a DX QSL that might move you up another notch in your DXCC standing. Svein LB8SC took advantage of that to acknowledge our 20 CW (his 15 watts--my 4 watts) QSO with a 4" x 6" color photo of himself with 2m HT in hand, his son Stein Roar, their Volvo, and a beautiful Norwegian lake. The note on the back was in broken English, but informative and warm. You know: there are DX stations that won't even ANSWER a W/K/N station calling them because we are so numerous!.

I work the 3905 Century Club Net regularly and use its free QSL bureau run by Pauline WA9CNV. Every now and then she puts something nice in with the QSL cards. From time to time I drop her a note to let her know that she's doing a great job. The same to the sorters at the Two-Letter Prefix 4th Call District Incoming QSL bureau. And always a picture post card to the sorters at a foreign QSL bureau when I send a packet of QSLs through one of them.

I learned the value of doing this stuff by my reaction to a letter that I received from Dean "WORLD-WIDE Amateur Radio Station N4PNI...The QUARTER-CENTURY NOVICE". He passed along a QSL card from Victor UP1BZZ (worked him QRP 40 CW). Dean included a long, long general commentary about himself, his present and ex-wives, his job, ham radio, the government, and a bunch of other things. He ended with "We all like to receive mail related to our ham radio activities and each QSL card is a special trophy to me. They are also needed for confirmation in awards' programs. I hope that you will support my efforts with a QSL card. Many thanks for the FB contact. I enjoyed spending a few moments of quality time with you on the air." This is a person who signs himself N4PNI: "Noted 4 Practically No Intelligance!"

73, Steve AB4EL

Park Ranger Survives 180 Foot Fall

Alvin Glaze, a Louisiana Forestry Ranger survived a 180' fall from a radio tower in Baton Rouge. Glaze was dismantling an antenna when he slipped backward onto one of seven sets of guy wires and rode the cable for 40 feet before letting go due to pain. He landed on another set of guy wires and managed to slide to the ground. He was cut about his arms, hands and leg, but no broken bones. He said he had his safety belt around something that was not secure... **W5YI 8/1/89**

New Call:

Jim Smith, a new RARS member, is now signing **N4WJM**, and was recently heard pounding the brass on 80 meters, building that code speed.....

'NEW LINE

Bruce Eggers, WA9NEW

97.1(a) CONTINUED

Precedence? What's that?

We started talking about the preamble of a message last month and covered the message number. Do you remember the message Chet sent to Sam? We said the preamble would look like this:

16 P W4ABC 13 Shelter 2, Raleigh 1238L Nov 28

Now that we know where the "16" came from, how about the "P"?

The second element in the preamble is the "precedence". What are the possible entries and why is this one "P"?

Possible precedences:

EMERGENCY: Any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be VERY RARE. On CW/RTTY, this designation will ALWAYS be spelled out. When in doubt, do not use it.

PRIORITY: Use abbreviation P on CW/RTTY. This classification is for: a) important messages having a specific time limit b) official messages not covered in the emergency category c) press dispatches and emergency related traffic not of the UTMOST urgency d) notice of death or injury in a disaster area, personal or official.

WELFARE: This classification, abbreviated W on CW/RTTY, refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry).

ROUTINE: Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine (R on CW/RTTY) should be handled last, or not at all when circuits are busy with higher precedence traffic.

OK, having said all of that, why did the sample message have a precedence of P? Well, it was clearly an "important message having a specific time limit". You might say it was of "life and death urgency" and it was an "official message of welfare agencies during emergencies requesting supplies ... vital to relief of stricken populace". But I chose NOT to assign a precedence of EMERGENCY for two reasons:

1) The need for a scheduled insulin injection was made three hours in advance.

2) The sending station is in direct contact with a station at the destination, NOT dependant upon multiple relays.

It wouldn't take much of a change to convince me that this message should be EMERGENCY but it wasn't, in my opinion, given the circumstances.

But don't get hung up on precedence! Of all of the thousands of messages I've handled over 25 years, there haven't been more than a few dozen that were anything other than "R". And you sure ought to get a few hundred under your belt BEFORE you have to worry about anything else. If you do, you WON'T worry about it!

Next Month: The rest of the preamble.

Popular Electronics: Listen for "CY"

"Someone should tell Popular Electronics' Editor, Julian S. Martin, KA2GUN, that dah-di-dah-dit dah-di-dah-dah is NOT "CQ". His page 2 editorial appearing in the August issue on the possibility of a code-free ham license has that as it's headline. He asks for reader input on a no-code ham class and again concludes with: "Til then, listen for my Dah-di-dah-dit dah-di-dah-dah."

W5YI Report 8/1/89

Mark Your Calendar:

TRIANGLE EAST
Amateur Radio Association

First Annual ARRL Sanctioned

HAMFEST

Sat., Oct. 21, 1989
8:30 AM - 3:30 PM
Smithfield Moose Lodge

At Exit 97 (I-95) & US 70-A
Selma, NC
VE EXAMS · ANTENNA FORUM

More Info:
Andy, WK2F
934-7979

Kirk, KK4YP
965-9577

Member:
Professional Photographers of America, Inc.

Images by Swanson

Portraits · Weddings · Commercial

Thomas Swanson, N4IZE
782-0791

5729 Wintergreen Dr.
Raleigh, NC 27609

THE PINE BOX

FURNITURE & GIFTS

PETE BLISS, W8DTD
411 DANIELS ST.
RALEIGH, NC 27605

ARLINE BLISS
JEFF BLISS
833-8104

Attention Radio Shack PRO-2021 Owners:

Tom McKee, K4ZAD has a deal for you.

I have developed an automated search and store module for Radio Shack scanners.

I have installed it in several models of Radio Shack scanners, but not yet in a 2021.

I will give you one of the modules and install it in exchange for the installation information I get.

Contact me, Tom McKee, K4ZAD @ 851-2542

Call Sign Mugs

Your amateur radio call sign on a distinctive 10 oz. ceramic coffee mug or a 15 oz. beer mug, with the ARRL or QCWA logo on the flip side. Get one for the shack and one for the office. Mug pairs can have the same or different call signs. Coffee mugs are $5.95 each, or two for $10.95. Beer mugs are $7.95 each, two for $14.95. S/H $1.50 for one, plus $0.50 for each additional mug. NC residents add 5% sales tax. State your logo choice.

Call Sign Cups
P.O. Box 17062 Dept. M
Raleigh, NC 27619

Bulk Rate
U.S. Postage Paid
Raleigh, NC
Permit No. 1731

Raleigh Amateur Radio Society, Inc.

P.O. Box 17124
Raleigh, NC 27619

Next RARS Meeting: Wednesday, Sept 6, 7:30 PM
Raleigh YMCA , 1601 Hillsborough St.
RARS Nets: Daily @ 8:00 PM on 146.04/64
Tuesday, 7:00 PM on 28.364
Technical Information Net - Saturday, 8:30 PM on 146.04/64

Events Calendar

Sept	**06**	Regular RARS Meeting, 7:30 PM, YMCA
Sept	**09 & 10**	ARRL VHF QSO Party
Sept	**10**	**HAMFEST!!** Gaithersburg, MD
Sept	**11**	**RARS Fall Novice / Tech Training Class starts** McKimmon Ctr of NCSU.
Sept	**13**	RARS Homebrew SIG Meeting, 7:30 PM. KM4BU @ 481-3856
Sept	**14**	RARS VHF/UHF SIG Meeting, 7:30 PM WA4MJF @ 266-4434
Sept	**16 & 17**	HAMFEST!! (VA State ARRL Convention) -- Virginia Beach, VA
Sept	**23**	**RARS 2 Meter Repeater Work Party 9:00 AM - Noon. We NEED YOU!**
Sept	**23 & 24**	CQ WW RTTY DX Contest
Oct	**1**	**HAMFEST!! Benson, NC** (JARS-fest -- see flier inside)